

**REMARKS**

Claim 26 has been amended. Claims 1-34 remain in the application.

The Examiner rejected claims 26-34 under 35 USC §112, second paragraph as being indefinite. In particular, the Examiner stated it was unclear what stage is referred to by "said differential amplifier" in line 19 of claim 26.

Applicants have amended independent claim 26 to substitute "differential pair" for "differential amplifier" to thereby refer back to the differential pair of line 9. Applicants thank the Examiner for his close reading of the claims which pointed out this error.

The Examiner rejected claims 16-25 under 35 USC §102(e) as being anticipated by Shih, et al. (hereinafter Shih).

Applicant's invention is directed to correction of signal errors that develop along a differential signal path. To realize this correction, Applicant has developed methods and structures which couple first and second transistors to the differential signal path and provide a differential amplifier which couples a differential correction signal to the differential signal path in response to like terminals of the first and second transistors.

In particular, Applicant's independent claim 16 is directed to an amplifier and recites:

- a) a differential amplifier that processes a differential signal along a differential signal path, and
- b) a correction sensor that has,
  - 1) first and second transistors coupled to different sides of the differential signal path, and
  - 2) a differential error amplifier that couples a differential correction signal to the differential signal path in differential response to a differential error signal generated by like terminals of the first and second transistors.

It is particularly noted that the differential error amplifier of claim 16 responds to a differential error signal generated by like terminals of the first and second transistors and not, for example, to an error signal generated by a circuit, network or system that includes first and second transistors.

In contrast to the elements recited in Applicant's claim 16, Shih teaches:

- a) "a limiting amplifier responsive to the input data signal and to an error correcting signal, the limiting amplifier being operative to generate the amplified data signal", and
- b) a feedback circuit which includes,
  - 1) "a low pass filter responsive to the --- amplified data signal, and operative to generate a filtered signal, and"
  - 2) "an error amplifier responsive to the filtered signal, and operative to provide the error correcting signal"

(see column 2, lines 47-50 and 53-57 of Shih's summary of the invention).

This structure is shown in Shih's FIG. 2, where a low-pass filter 160 is coupled to the output of a limiting amplifier 102. An error amplifier 170 responds to the output of the low-pass filter and provides an error correcting signal to the input of the limiting amplifier 102.

In addition, Shih notes "the negative output terminal 168 of the low-pass filter 160 provides a low frequency component" and "the positive output terminal 166 of the low-pass filter 160 provides a low frequency component" (column 5, lines 28-34).

It is apparent that Shih teaches away from the elements of Applicant's claim 16 because he,

- a) teaches that a low pass filter should be coupled to an amplifier signal rather than the simple first and second transistors recited in Applicant's claim 16, and
- b) teaches that an error amplifier should respond to a filtered signal from his low pass filter rather than to like terminals of the first and second transistors as recited in Applicant's claim 16.

Because Shih positions a low pass filter between his error amplifier and an amplifier signal and requires that his error amplifier respond to the filter's filtered signal, one following Shih's teachings would find it impossible to construct the amplifier of Applicant's claim 16 in which a differential error amplifier responds to like terminals of Applicant's first and second transistors. It is noted, in passing, that the like terminals do not generate the low frequency components provided by Shih's low pass filter. Such low frequency components (and their associated time delays) would significantly degrade the effectiveness of the differential error signal of Applicant's claim 16.

Because he teaches away from the elements of Applicant's independent claim 16, Shih cannot anticipate this claim nor can he contribute to a *prima facie* case of obviousness with respect to this claim. Accordingly, claim 16 patentably distinguishes over the cited art. Because claims 17-25 add further limitations to claim 16, they also patentably distinguish over the cited art.

The Examiner also rejected claims 1-8 under 35 USC §102(e) as being anticipated by Shih.

Applicant's independent claim 1 is directed to a method of reducing differential-heating signal errors along a differential signal path and includes process steps of a) coupling first and second transistors to different sides of the differential signal path, and b) providing a differential correction signal to the differential signal path in differential response to a differential error signal generated by like terminals of the first and second transistors.

As shown above with respect to claim 16, Shih teaches away from these

steps and accordingly, Shih cannot anticipate this claim nor can he contribute to a *prima facie* case of obviousness with respect to this claim. Accordingly, claim 1 patentably distinguishes over the cited art. Because claims 2-8 add further limitations to claim 1, they also patentably distinguish over the cited art.

The Examiner also rejected claims 9-15 under 35 USC §102(e) as being anticipated by Shih.

Applicant's independent claim 9 is directed to a correction sensor which includes the first and second transistors and differential error amplifier of Applicant's claim 16..

As shown above with respect to claim 16, Shih teaches away from these elements and accordingly, Shih cannot anticipate this claim nor can he contribute to a *prima facie* case of obviousness with respect to this claim. Accordingly, claim 9 patentably distinguishes over the cited art. Because claims 10-15 add further limitations to claim 9, they also patentably distinguish over the cited art.

Because there was not an art rejection of Applicant's claims 16-25, Applicant assumes that they are allowable over the cited art. For the record, it is noted that Applicant's independent claim 26 is directed to a pin electronics system which includes the first and second transistors and differential error amplifier of Applicant's claim 16.

As shown above with respect to claim 16, Shih teaches away from these elements and accordingly, Shih cannot anticipate this claim nor can he contribute to a *prima facie* case of obviousness with respect to this claim. Accordingly, claim 26 patentably distinguishes over the cited art. Because claims 27-34 add further limitations to claim 26, they also patentably distinguish over the cited art.

Although Applicant recognizes that the Examiner stated claims 3, 4, 11, 12 and 19-23 would be allowable if rewritten in independent form, rewriting them at this time would add a substantial number of independent claims and

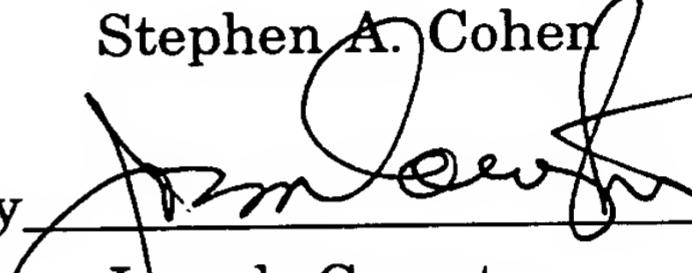
associated claim fees. In view of the fact that the cited art fails to teach the limitations in Applicant's independent claims, Applicant prefers, at this time, to leave these claims in dependent form, at least until prosecution of the application is complete.

Applicants therefore request reconsideration and withdrawal of the rejections and objections and an early allowance of claims 1, 2, 5-10, 13-18, 24 and 25 in addition to the already-allowed claims 3, 4, 11, 12, 19-23 and 26-34.

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